



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,310	06/01/2001	Johannes Jacobus Van Vaals	PHN 17,651	4882

7590 01/22/2003

Philips Electronics North America Corporation
80 White Plains Road
Tarrytown, NY 10591

EXAMINER

FETZNER, TIFFANY A

ART UNIT	PAPER NUMBER
----------	--------------

2862

DATE MAILED: 01/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/857,310

Applicant(s)
Johannes Van Vaals

Examiner
Tiffany Fetzner

Art Unit
2862



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 14, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on Nov 14, 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ | 6) <input type="checkbox"/> Other: |

Art Unit: 2862

DETAILED Final ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

2. ***Response to Arguments***

3. Applicant's arguments filed November 14th 2002 have been fully considered but they are not persuasive.

A) Applicant argues on page 25, that the examiner fails to show that the **Schneider et al.**, references teaches or suggests that "the position of a measuring site is determined". However, **Schneider et al.**, teaches that "the region to be imaged is scanned" and that "the nuclear spins in a narrow slice in the three dimensional imaged object along spatial z-plane are excited. ... Hence the position of the slice may be controlled by the gradient G_z intensity and the RF frequency." [See **Schneider et al.**, col. 4 lines 47-55; col. 1 lines 24-30] The region to be imaged, (i.e. the slice of the patient that is to be excited) is interpreted by the examiner as a synonymous term to applicant's claimed "measurement site". The position of this measurement site is controlled, and located in a slice, therefore contrary to applicant's argument the **Schneider et al.**, reference does teach or suggests that "the position of a measuring site" (i.e. a region or slice of interest) "is determined".

B) Applicant's arguments also argue, that a feature of the invention is the ability to correct for patient motion, however this feature is not an aspect of independent amended claims 1, 6, 10, 12, or any of applicant's dependent claims. The examiner notes that claims are examined based on

Art Unit: 2862

what is actually claimed, and that although the claims are read in light of the specification, features from applicant's disclosure, are not considered to be features of the claims unless positively recited by the claims, therefore the argument is not persuasive at all. [See the November 14th 2002 amendment remarks on page 25 through page 26].

D) The applicant argues that **Schneider et al.**, lacks teaching the use of a microcoil, however a microcoil, is only a feature of dependent claims 9, 11, and New dependent claim 13 it is not an aspect of originally filed claims 1, 6, 10, or 12; and the rejection of originally dependent claims, 9 and 11 was under 35 USC 103 in view of **Rasche et al.**, which teaches and shows a microcoil therefore, applicant's argument is not persuasive. As for applicant's arguments concerning a geometrical relationship, claimed only by new claims 14 through 17; the newly amended feature is taught as set forth below.

4. *Drawings*

5. The Proposed red-ink drawing correction to Figure 1 is approved by the examiner. New-formal drawings which include the approved red-ink changes are still needed and required.

6. *Specification*

7. The objection to the abstract, **has been overcome** by the amendment of November 14th 2002.

8. The objections to the disclosure are **rescinded** because applicant has removed the words "for example", "such as", and "or the like", from the originally filed disclosure.

Claim Rejections - 35 USC § 102

Art Unit: 2862

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Amended Claims 1, 3, 4, 6, 7, 8, and 12** rejected under **35 U.S.C. 102(b)** as being anticipated by **Schneider et al.**, US patent 5,711,300 issued January 27th 1998, from the July 31st 2002 office action are **maintained and made final**.

11. With respect to **Amended Claim 1**, **Schneider et al.**, teaches and suggests “A method of forming a magnetic resonance image of a region to be imaged comprising the steps of: acquiring magnetic resonance signals” [See col. 1 20-24], “determining the position of a measuring site” [See col. 1 lines 24-27, and col. 4 lines 47-55 where **Schneider et al.**, teaches that typically, the region to be imaged (i.e. interpreted as the location, or position from which images are desired) is scanned by a sequence of measurement cycles in which the Gx, Gy, and Gz magnetic field gradients vary according to the particular localization method being used. The examiner notes that “localization of the measurement signal data” suggests that the location and / or position of the subject/object/target/ or measurement site is determined, because localization automatically restricts the imaging scan, to a specific, limited area; which in the case of **Schneider et al.**, is the location or position of the tissues, that are to be measured by the MR scan. Applicant argues on page 25, that the examiner fails to show that the **Schneider et al.**, references teaches or suggests that “the position of a measuring site is determined”. However, **Schneider et al.**, teaches that “the

Art Unit: 2862

region to be imaged is scanned” and that “the nuclear spins in a narrow slice in the three dimensional imaged object along spatial z-plane are excited. ... Hence the position of the slice may be controlled by the gradient G_z intensity and the RF frequency.” [See **Schneider et al.**, col. 4 lines 47-55; col. 1 lines 24-30] The region to be imaged, (i.e. the slice of the patient that is to be excited) is interpreted by the examiner as a synonymous term to applicant’s claimed “measurement site”. The position of this measurement site is controlled, and located in a slice, therefore contrary to applicant’s argument the **Schneider et al.**, reference does teach or suggests that “the position of a measuring site” (i.e. a region or slice of interest) “is determined”.

12. **Schneider et al.**, also teaches “reconstructing the magnetic resonance image from the magnetic resonance signals and on the basis of the position of the measuring site.” [See col. 1 lines 20-30; the abstract where corresponding pixels in two reconstructed images of a localized tissue slice are used to create temperature maps; for the mutual location in the reconstructed images; col. 4 lines 47 through col. 5 line 24 where **Schneider et al.**, teaches that by exciting specific slices, in the region from which an image is scanned, and measurement data is obtained, an image of the actual object in within the localized measurement zone is formed.

13. With respect to **Amended Claim 3**, **Schneider et al.**, teaches “acquiring a set of measuring magnetic resonance signals at a reference temperature, acquiring a set of measuring magnetic resonance signals after the temperature has been changed, notably increased, at the area of the measuring site, deriving a reference magnetic resonance image from the reference magnetic resonance signals, deriving a measuring magnetic resonance image from the measuring magnetic resonance signals,” [See col. 6 line 9 through col. 8 line 67; table 2 which shows temperature

Art Unit: 2862

ranges for the different measurements; col. 1 line 4 through col. 2 line 5]. The examiner notes that because the reference and measurement images; obtain there phase difference information, for temperature, at corresponding pixels of the two phase images (i.e. the reference image and the measurement image) the **Schneider et al.**, reference also teaches and or suggests “making the measuring magnetic resonance image and the reference magnetic resonance image to register on the basis of the position (i.e. the corresponding pixels in the excited slice) determined for the measuring site (i.e. the excited slice that represents the region of the patient to be imaged).” [See abstract, col. 6 line 9 through col. 8 line 67; table 2; col. 1 line 4 through col. 2 line 5] The same reasons for rejection, that apply to **Amended claim 1** also apply to **Amended claim 3**.

14. With respect to **Claim 4**, **Schneider et al.**, teaches “On the basis of the position determined for the measuring site” (ie., the location of the excited slice, of the region to be imaged) acquiring the reference magnetic resonance signals and the measuring magnetic resonance signals from essentially the same region.” [See col. 6 line 9 through col. 8 line 67; table 2; col. 1 line 4 through col. 2 line 5; abstract] The same reasons for rejection, that apply to **Amended claims 1, 3** also apply to **Amended claim 4**.

15. With respect to **Amended Claim 6**, **Schneider et al.**, teaches and suggests “A method of forming a magnetic resonance image of a region to be imaged comprising the steps of: acquiring magnetic resonance signals” [See col. 1 lines 20-24, col. 4 lines 47-55], **Schneider et al.**, suggests “Measuring the position of a measuring site” [See col. 1 lines 24-27; and col. 4 lines 48-55 where **Schneider et al.**, teaches that typically, the region to be imaged (i.e. interpreted as the location, or position from which images are desired) is scanned by a sequence of “narrow”

Art Unit: 2862

measurement cycles in which the Gx, Gy, and Gz magnetic field gradients vary according to the particular localization method being used. The examiner notes that “localization of the measurement signal data” suggests that the location and / or position of the subject / object / target / or measurement site is determined, known or measured, because localization automatically restricts the imaging scan, to a specific, known and measured, limited area; which in the case of **Schneider et al.**, is the location or position of the tissues, that are to be measured by the MR scan’. **Schneider et al.**, also teaches “deriving the temperature at the measuring site from the magnetic resonance signals.” [See col. 5 line 17 through col. 8 line 67]. The same reasons for rejection, that apply to **Amended claim 1** also apply to **Amended claim 6**.

16. With respect to **Amended Claim 7**, **Schneider et al.**, teaches and suggests “acquiring a set of reference magnetic resonance signals at a reference temperature” [See col. 6 lines 42-44], **Schneider et al.**, suggests “changing the temperature at the area of the measuring site relative to the reference temperature, the temperature notably being increased at the area of the measuring site,” [See col. 5 lines 34 through col. 8 line 67; table 2 the examiner notes that in table 2 all the temperature changes go from lower values to higher values, and that in conventional MR treatments for hypothermia, the goal is to warm up a region of a patient, therefore since the **Schneider et al.**, teaches, using the method in a therapeutic manner, increasing the temperature at the measurement site is suggested by the reference. Additionally, **Schneider et al.**, teaches and suggests “subsequently acquiring a set of measuring magnetic resonance signals, and deriving a temperature distribution from the reference magnetic resonance signals, the position of the measuring site and the measuring magnetic resonance signals.” [See col. 5 lines 34 through col. 8

Art Unit: 2862

line 67; table 2; and the entire reference in general.] The same reasons for rejection, that apply to

Amended claims 1, 6 also apply to **Amended claim 7**.

17. With respect to **Amended Claim 8**, **Schneider et al.**, teaches and suggests “deriving a thermal image from the measuring magnetic resonance signals, the reference magnetic resonance signals and the position of the measuring site, said thermal image reproducing the temperature distribution.” [See col. 5 line 17 through col. 8 line 67; the abstract]. The examiner notes that the measured, or target site of the imaged object is what the temperature or thermal images of **Schneider et al.**, reference represents. The same reasons for rejection, obviousness, and motivation to combine that apply to **Amended claims 1, 6, 7** also apply to **Amended claim 8**.

18. With respect to **Amended Claim 12**, **Schneider et al.**, teaches and suggests “A computer program which forms a magnetic resonance image of a region to be imaged containing instructions for: the acquisition of magnetic resonance signals, and the determination of the position of a measuring site” [See col. 2 line 26 through col. 8 line 67; Figures 1, 2], “and the reconstruction of a magnetic resonance image from the magnetic resonance imaging signals and the position determined for the measuring site.” [See Figure 2, the abstract, where images of corresponding pixels in the reference and measurement images are taught, col. 2 line 26 through col. 8 line 67.] The same reasons for rejection, that apply to **claim 1** also apply to **claim 12**.

19. With respect to **New Claims 14 through 17** which depend respectively from **Amended claims 1, 6, 10, and 12**; and each require the limitation of “determining a geometrical relationship between the measuring site and the region to be imaged”. **Schneider et al.**, teaches and suggests, this limitation because “a narrow slice in the three dimensional imaged object along a spatial z-

Art Unit: 2862

plane” defines a “geometrical relationship” (i.e. a narrow slice, of the spatial z-plane”) between the “measuring site” (i.e. the area of excited nuclei, from which MR signals are detected, in this case a planar region or slice) and the three-dimensional area of the object to be scanned, or the “region to be imaged” [See col. 4 lines 47-55; col. 1 lines 24-30] **Schneider et al.**, also teaches and suggests, that “the reconstruction of the magnetic resonance image occurs based on the geometrical relationship.” [See col. 1 20-30; col. 4 lines 23-39; col. 5 lines 17-32; where each slice constitutes an array of pixels that undergo Fourier transformation, in order to reconstruct an image. Since the reconstruction of the MR image occurs based on the location of the array of pixels, (i.e. the geometrically excited slice), the **Schneider et al.**, reference teaches this limitation. The same reasons for rejection, that apply to **Amended claims 1, 6, 10, and 12** also apply to **New claims 14-17**, and need not be reiterated.

20. ***Claim Rejections - 35 USC § 103***

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 2862

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
23. **Amended Claims 2, and 5** rejected under **35 U.S.C. 103(a)** as being unpatentable over in view of **Schneider et al.**, US patent 5,711,300 issued January 27th 1998; in view of **Ishihara et al.**, US patent 5,378,987 issued January 3rd 1995 from the July 31st 2002 office action are **maintained and made final**.
24. With respect to **Amended Claim 2 Schneider et al.**, teaches and suggests “reproducing a detail and an indication of the measuring site” [See abstract, col. 4 lines 47 through col. 5 line 24” where an image of the actual object from which the MR measurement signals are obtained, directly suggests “reproducing a detail and an indication of the measuring site”. **Schneider et al.**, lacks directly teaching “correcting the position of the detail in the magnetic resonance image on the basis of the position of the indication of the measuring site in the magnetic resonance image” However, **Ishihara et al.**, teaches this limitation [See col. 3 lines 21-27; col. 9 line 16 through col. 10 line 50; and Figures 7 through 10 where **Ishihara et al.**, teaches an NMR method that teaches and suggests the ability to measure the temperature distribution within a target body using NMR, while accounting for the displacement of the target body during the temperature measurement, and shows/suggests from figures 9-10, correcting the indication of position for the imaged, and measured object]”
25. It would have been obvious to one of ordinary skill in the art, at the time that the invention was made, that the teachings of **Schneider et al.**, are both modifiable and combinable with the teachings of **Ishihara et al.**, because both **Schneider et al.**, and **Ishihara et al.**, teach NMR

Art Unit: 2862

methods for producing images that are indicative of thermal changes, of the same targeted anatomy over time. **Schneider et al.**, ensures that the pixels of the respective images correspond, and **Ishihara et al.**, ensures that the anatomy corresponds by correcting for patient motion, in situations where equivalent pixels, do not show the equivalent anatomy. The same reasons for rejection, that apply to **Amended claim 1** also apply to **Amended claim 2**.

26. With respect to **Amended Claim 5**, **Schneider et al.**, teaches and suggests “reproducing a detail and an indication of the measuring site in the reference magnetic resonance image, “reproducing the same detail and the indication of the measuring site in the measuring magnetic resonance image, and wherein a shift of the detail (i.e. a phase difference, or complex phase difference, of corresponding pixels in reference and measurement images of the same object automatically “indicates a phase shift derived from respective positions of the detail relative to the indication of the measuring site in the reference magnetic resonance image and the measuring magnetic resonance image,”) [See abstract, col. 5 line 17 through col. 8 line 67; table 2; col. 1 line 4 through col. 2 line 5. The examiner notes that in the **Schneider et al.**, reference the reference and measurement images, as taught by **Schneider et al.**, show the temperature changes of the same anatomy, because the pixels necessarily correspond to one another. **Schneider et al.**, lacks directly teaching that the limitation of “the position of the detail in the measuring magnetic resonance image being corrected on the basis of the derived shift of the detail.” However, **Ishihara et al.**, teaches this limitation. [See col. 3 lines 21-27; col. 9 line 16 through col. 10 line 50; and Figures 7 through 10 where **Ishihara et al.**, teaches an NMR method that teaches and suggests the ability to measure the temperature distribution within a target body using NMR,

Art Unit: 2862

while accounting for the displacement of the target body during the temperature measurement, and shows/suggests from figures 9-10, correcting the indication of position for the imaged, and measured object]” The same reasons for rejection, that apply to **Amended claims 1, 3** also apply to **Amended claim 5**.

27. **Amended Claims 9-11** rejected under **35 U.S.C. 103(a)** as being unpatentable over in view of **Schneider et al.**, US patent 5,711,300 issued January 27th 1998; in view of **Rasche et al.**, US patent 5,938,599 issued August 17th 1999; filed November 22nd 1996 from the July 31st 2002 office action are **maintained and made final**.

28. With respect to **Amended Claim 9**, which depends from **amended claim 1**, and corresponding **new claim 13**, which depends from **amended claim 6**, **Schneider et al.**, lacks directly teaching or suggesting “a microcoil is used to acquire position magnetic resonance signals at the area of the microcoil, and the position of the measuring site is derived from the position magnetic resonance signals.” However, **Rasche et al.**, teaches determining the nuclear magnetization in the surrounding region of an object by means of a micro-coil which is mounted on the inserted object such as a catheter, and then being able to determine the position of the object from the nuclear magnetization [See abstract] This teaching suggests applicant’s dependent feature since the measured MR signals are determined from the position of the micro-coil within the object, or human subject. It would have been obvious to one of ordinary skill in the art, at the time that the invention was made, that the teachings of **Schneider et al.**, are both modifiable and combinable with the teachings of **Rasche et al.**, because the goal of the **Schneider et al.**, reference is to accurately measure in vivo temperature changes in NMR methods. The fact that

Art Unit: 2862

Schneider et al., teaches in vivo measurements suggests that a catheter, micro-coil, or invasive NMR probe is combinable with the method and system of **Schneider et al.**, since catheters, micro-coils, or invasive NMR probes are conventionally used to make In vivo NMR temperature measurements, as is well known in the MRI / NMR art. The same reasons for rejection, that apply to **Amended claims 1, 6**, also apply to **Amended claim 9, and new claim 13**.

29. With respect to **Amended Claim 10**, the references of both **Schneider et al.**, and **Rasche et al.**, teach and suggest “A magnetic resonance imaging system for forming a magnetic resonance image of a region to be imaged comprising:” provided with a coil system for acquiring magnetic resonance signals and for determining the position of a measuring site, and a reconstruction unit for the reconstruction of the magnetic resonance image from the magnetic resonance imaging signals and the position determined for the measuring site.” [See **Schneider et al.**, Figures 1, 2, col. 2 line 19 through col. 8 line 67; **Rasche et al.**, Figures 1, 2, 5; the abstract; col. 1 line 50 through col. 7 line 62]. The same reasons for rejection, obviousness, and motivation to combine that apply to **Amended claims 1, 6, 9** also apply to **Amended claim 10**.

30. With respect to **Amended Claim 11**, **Schneider et al.**, lacks directly teaching or suggesting “a microcoil for the acquisition of position magnetic resonance signals at the area of the microcoil, and wherein the reconstruction unit is arranged to derive the magnetic resonance image from the magnetic resonance signals and on the basis of the position magnetic resonance signals.” However, **Rasche et al.**, teaches and suggests this limitation for the same reasons as those give in the rejection of claim 9 which need not be reiterated. The same reasons for rejection,

Art Unit: 2862

obviousness, and motivation to combine that apply to **Amended claims 1, 6, 9, 10** also apply to **Amended claim 11**.

31. The **prior art made of record** and not relied upon is considered pertinent to applicant's disclosure. .

A) Van Vaals et al., US patent **5,938,600** issued August 17th 1999; filed December 9th 1996.

B) Van Vaals et al., US patent 6,064,206 issued May 16th 2000.

C) Zhou et al., US patent 6,377,834 B1 issued April 23rd 2002 filed April 24th 2000.

D) Van Vaals et al., PCT WO 99/21024 published April 29th 1999.

E) Van Vaals, PCT WO 01/25810 published April 12th 2001; which corresponds to the instant application and is just noted for the purposes of a complete record.

32. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

33. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

Art Unit: 2862

will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tiffany Fetzner whose telephone number is (703) 305-0430. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm., and on alternate Friday's from 7:00am to 3:30pm.


35. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on (703) 305-4816. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3432 .

36. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0956.



TAF

January 21, 2003



EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800